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202301UECM1404OE2b

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Started on	Saturday, 4 March 2023, 06:00 PM
Completed on	Saturday, 4 March 2023, 06:00 PM
Time taken	8 secs
Grade	0 out of a maximum of 10 (0%)

1

Marks: 1

Find the PV of an annuity with payments of 1500 at the beginning of every 3 years for 18 years at 5% effective per annum, in terms of interest functions at 5%. _____

Answer:

[Make comment or override grade](#)

Incorrect
Correct answer: 6438.77

Marks for this submission: 0/1.

2

Marks: 1

The proceeds of a 20,000 death benefit are left on deposit with an insurance company for seven years at an annual effective interest rate of 6%. The balance at the end of seven years is paid to the beneficiary in 156 equal monthly payments of X, with the first payment made immediately. During the payout period, interest is credited at an annual effective interest rate of 4%. Calculate X. _____

Answer:

[Make comment or override grade](#)

Incorrect
Correct answer: 245.674359

Marks for this submission: 0/1.

3

Marks: 1

- Payments of 1 at the end of first year and every three years thereafter.
- Payments of 2 at the end of second year and every three years thereafter.
- Payments of 3 at the end of third year and every three years thereafter.

The interest rate is 12% convertible semiannually. Calculate the present value of this perpetuity. _____

Answer:

[Make comment or override grade](#)

Incorrect
Correct answer: 15.554778

Marks for this submission: 0/1.

4

Marks: 1

You are given $\delta_t = 4/(57+t)$ for $0 \leq t \leq 5$. Calculate $s_{\overline{5}|}$. _____

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 5.732523

Marks for this submission: 0/1.

5

Marks: 1

Jenny receives 11-year increasing annuity-immediate paying 500 the first year and increasing by 500 each year thereafter. Matt receives a 11-year decreasing annuity-immediate paying Y the first year and decreasing by $Y/11$ each year thereafter. At an effective annual interest rate of 11%, both annuities have the same present value. Calculate Y . _____

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 3900.113763

Marks for this submission: 0/1.

6

Marks: 1

Two annuities have equal present values. The first is an annuity-immediate with quarterly payments of X for 12 years. The second is an increasing-annuity with 12 annual payments. The first payment is 700 and subsequent payments increase by 70.0 per year. You may assume an annual effective interest rate of 7%. Determine X . _____

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 250.803241

Marks for this submission: 0/1.

7

Marks: 1

An annuity-immediate pays 19 at the end of years 1 and 2, 18 at the ends of years 3 and 4, etc., with payments decreasing by 1 every second year, until nothing is paid. The effective annual rate of interest is 6%. Calculate the present value of this annuity-immediate. _____

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 196.553243

Marks for this submission: 0/1.

8

Marks: 1

Bob purchases an increasing perpetuity with payments occurring at the end of every 2 years. The first payment is 1, the second one is 2, the third one is 3, etc. The price of the perpetuity is 150. Calculate the annual effective interest rate. _____

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 0.041658

Marks for this submission: 0/1.

9

Marks: 1

Chass deposits 340 per month beginning one month from now. The monthly deposits increase by 8% every two years. At a nominal interest rate of 12% convertible monthly, calculate the accumulated value of the deposits at the end of 26 years. _____

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 946343.41203

Marks for this submission: 0/1.

10 🗨

Marks: 1

You are given:

- The force of interest at time t is $1100t^3$.
- R is the present value of a 6 year continuously increasing annuity which has a rate of payment of $800t^3$ at time t .

Calculate R . _____

Answer:




[Make comment or override grade](#)

Incorrect

Correct answer: 0.727273

Marks for this submission: 0/1.

 [Moodle Docs for this page](#)

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